

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

**DATE:**

**SUBJECT:** Food Web Modeling  
Onondaga Lake, NY

**FROM:** Mindy J. Pensak, Environmental Scientist  
Hazardous Waste Support Branch (DESA-HWSB)

**TO:** Robert Nunes, Remedial Project Manager  
Central New York Remediation Section (ERRD-NYRB-C)

As per your request, we have reviewed the "Food Web Modeling" provided in an email dated January 9, 2001 and prepared by Exponent Consultants, Inc. for Onondaga Lake located in Syracuse, New York. We offer the following comments.

Overall, risk to the various ecological receptors should be calculated using deterministic rather than probabilistic calculations. In the event that probabilistic modeling is conducted, a detailed workplan must be provided and include the various parameters and variables which will be used in these calculations. These inputs should be approved prior to the submittal of the final modeling report. It is unclear how various subpopulations will be selected to be used in these risk calculations. Unless otherwise agreed to, risk to receptor populations, rather than subpopulations should be determined. The TRVs which will be used should be provided for review to determine their validity to the selected receptors and habitat. Specific comments and questions are detailed below:

1) It is unclear why the terms SOC and COC are both being used. In order to minimize confusion only one term, COC, should be employed.

2) Please refer to ERAGs (1997) for a discussion of developing appropriate assessment endpoints; the sustainability of a population is not an appropriate endpoint.

3) It is unclear how the population and subpopulations will be calculated, along with specific foraging areas (and respective COCs) which will be used in the proposed modeling. Please indicate whether calculations were based on seasonal, diurnal/nocturnal observations and surveys. Also whether the age and sex of individuals (i.e. differing diets, metabolisms, lifestyle habitats, etc.) will be considered in these calculations.

4) In bullet # 1 under "Characterizing Exposure," it should also be noted that the minimum weight to maximum ingestion rate should be used to be conservative.

5) In bullet # 2 under "Characterizing Exposure," it should be noted why the receptors home range will be centered on the western shore of the lake.

6) Please indicate whether the "representative concentration in the receptor's prey" will be based on actual tissue data, or BAF/BACs. The latter should be provided in a SMDP and reviewed and approved prior to the use in these calculations.

**2DESA-HWSB: NAME:Pensak**

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**CONCURRENCES**

7) In the Tier 1 calculations, indicate whether EER should be EEC (the variables may be confused).

8) The calculation of migration cycles should account for young of the year organisms.

9) It is unclear how the calculation of background exposure will be used in the risk assessment process.

10) In the “Risk Estimation” section, information on how the data for these variables will be calculated should be provided.

11) The complete reference for Calabrese and Baldwin, 1993 should be provided.

If you have any questions, comments, or require further information, please contact me at (732) 321-6705.

cc:     John LaPadula, ERRD-NYRB                      Lisa Rosman, NOAA  
         Joel Singerman, ERRD-NYRB-C               Charles Merckel, USFWS  
         John Cantilli, DEPP-WPB                       Emmy Thomee, NYSDEC  
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